an outside surface (11) provided with openings (12) and the foil (20) is pleated in line with said openings (12).

--25. (new) A protection sheath according to claim 24, characterized in that the foil (20) is pleated inside the openings (12).

--26. (new) A protection sheath according to claim 23, characterized in that the pleats in the foil (20) are adapted to form reserves of air (15).

/--27. (new) A protection sheath according to claim 23, characterized in that the substrate (10) is made of textile and includes openings (12) between textile threads (13) and the foil (20) is pleated in line with said openings (12).

--28. /(new) A protection sheath according to claim 27, characterized in that the substrate (10) is formed of braided or knitted threads (13).

claim 28, characterized in that the reflective foil (20) is pleated between the braided or knitted threads (13).

--30. (new) A protection sheath according to claim 23, characterized in that the substrate is a corrugated plastics material tube (14).

- --31. (new) A protection sheath according to claim 30, characterized in that the corrugated plastics material tube (14) is slit longitudinally.
- --32. (new) A protection sheath according to claim 30, characterized in that the foil (20) is pleated inside annular recesses (12) of the corrugated tube (14).
- --33. (new) A protection sheath according to claim 23, characterized in that the substrate (10, 14) is tubular.
- --34. (new) A protection sheath according to claim 23, characterized in that the substrate (10, 14) can be stretched elastically in the longitudinal and/or radial direction.
- --35. (new) A protection sheath according to claim 23, characterized in that the reflective foil (20) is woven from aluminized glass fibers.
- sheath including a substrate (10, 14) and a reflective foil (20) adapted to be fixed to said substrate (10, 14), characterized in that it includes the following steps:
- elastically stretching the substrate (10, 14) from a relaxed configuration;
- fixing the reflective foil (20) to the stretched substrate (10, 14), and

- elastically shrinking the substrate (10, 14) into said relaxed configuration.

claim 14, characterized in that, in the stretching step, the substrate (10, 14) is stretched longitudinally and/or radially.

--38. (new) A fabrication method according to claim 36, characterized in that the shrinking of the substrate (10, 14) covered with the reflective foil (20) is forced by means of rollers (22a, 22b) adapted to press said foil (20) onto the substrate (10, 14).

--39. (new) A fabrication method according to claim 36, characterized in that the foil (20) is pleated inside openings (12) in the substrate (10, 14) during the shrinkage step.

--40 (new) A fabrication method according to claim 36, characterized in that, in the fixing step, the reflective foil (20) is applied in the lengthwise direction of the substrate (10, 14).

--41. (new) A fabrication method according to claim 36, characterized in that the reflective foil- (20) is applied in a helix around the substrate (10, 14)

--42. (new) A fabrication method according to claim 36, characterized in that, in the fixing step, the

reflective foil (20) is fixed to the substrate (10, 14) by an adhesive.

--43. (new) A fabrication method according to claim 36, characterized in that the substrate (10) includes braided or knitted heat-shrink threads (13) and in that during the step of shrinking the substrate (10) the sheath is heated to shrink the heat-shrink threads (13).